STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Office of Conservation and Coastal Lands
Honolulu, Hawaii

Board of Land and Natural Resources
Department of Land and Natural Resources
State of Hawai`i
Honolulu, Hawai`i

FILE NO.: CDUA OA-3284
REF: OCCL: MC
Acceptance Date: January 10, 2006
180 Exp. Date: July 12, 2006

April 13, 2006

REGARDING: Four-Inch Sewer Force Main under Kalihi Channel
part of the Ke`ehi Small Boat Harbor Boating Pump-out Facility

APPLICANT: Division of Boating & Ocean Recreation, Department of Land and Natural Resources, 1151 Punchbowl Street, Honolulu HI 96813

AGENT: SSFM International, Inc., 501 Sumner Street, Suite 620, Honolulu HI 96817

LANDOWNER: State of Hawai`i

LOCATION: Kalihi-Kai, Honolulu, O`ahu

TMK's: (1) 1-2-025:024, 025 & 027; 1-5-041:006

AREA OF USE: 0.32 acres

SUBZONE: Resource [Submerged Lands]

DESCRIPTION OF AREA:

The project area is on the southeastern portion of O`ahu, and is located within portions of the Ke`ehi Small Boat Harbor (SBH), the Sand Island Recreational Area, and the submerged lands of the Kalihi Channel. The fastlands of the Boat Harbor and Recreational Area are all within the State Land Use Urban District; only the submerged lands under the Kalihi Channel lie within the State Land Use Conservation District.

The area is an industrialized urban waterfront that has been heavily impacted by development. Pre-industrialization the area was a shallow bay dominated by reefs, mudflats, and fishponds. With development it was transformed to an embayment with deep channels. The U.S. Army Corps of Engineers dredged the Kalihi Channel to a depth

of 35 to 40 feet. The adjoining fastlands are primarily composed of fill from this and other dredging operations in the area.

The Kalihi Channel connects Ke`ehi Lagoon with Kapālama Bay and Honolulu Harbor. It is 700 feet across at its mouth. It was once used as an entrance to Honolulu Harbor by ocean-going vessels, and the Sand Island Bascule Bridge originally could be lifted to allow large vessels to pass, although it is no longer in service. A second bridge was built parallel and adjacent to Bascule Bridge in 1989.

The Ke`ehi Small Boat Harbor is on the northwestern, mauka side of the channel. It contains 389 berths, a boat ramp, fish hoist, pump-out facility, vessel washdown area, waste oil shed, harbor office, bathrooms and showers. There are an additional 202 offshore moorings. Planned improvements to Ke`ehi SBH include a new pump-out facility, sewer lift station, 8-inch gravity line, 3-inch force main, and a portion of the new 4-inch force main.

Sand Island Recreation area is on the opposite, southern side of the channel. A public boat launching ramp rests at the mouth of the channel, and the State Marine Education & Training Center immediately mauka of that.

There are no residential communities in the project area. The nearest ones are the Kalihi-Pālama and Camp Catlin Naval Reservation neighborhoods, both approximately one mile from the site.

Today the channel is primarily used by small vessels traveling from Honolulu Harbor through Ke`ehi Lagoon to the outer Māmala Bay. The boat ramp on Sand Island is used for small recreational vehicles such as boats, canoes, and jet skis. Some shoreline fishing occurs from the parking lot. Offshore uses include various types of water sports, including water skiing, jet skiing, sailing, fishing, canoeing, and kayaking.

The existing conditions are shown in **Exhibit 1:** ***Project Location and Vicinity Map,*** **Exhibit 2:** ***Existing Conditions Map***, and **Exhibit 3:** ***TMK Map.***

CURRENT FACILITIES:

The Division of Boating & Ocean Recreation (DOBOR) is requesting the project in order to improve the existing wastewater system that serves the Ke`ehi SBH Harbor Master's Office, maintenance facility, and associated harbor facilities. There are two parts to the system: a seepage pit that serves the Harbor Master's Office and maintenance facility, and holding tanks that serve the existing boater's pump-out facility. The current system is ineffective and outdated, and is a direct and indirect source of groundwater pollution in the area.

The original seepage pit system consisted of two seepage pits, a septic tank, and a leaching field. A clogged tank and a high groundwater table have rendered the system inoperable. At the present moment sewage is held in the two seepage pits, and

periodically pumped out and hauled off-site for treatment. This results in high maintenance costs for the operators of the site. The clogged leaching field is also a source of groundwater pollution in the area, and the entire system is at risk of overflow, which would dump untreated sewage directly into the neighboring waters.

The second part of the system is the two aboveground polyethylene holding tanks. The tanks receive wastewater from boats using the existing pump-out facility. This waste must also be transported off-site for processing. The system often goes unused due to its limited storage capacity, and there are reports that boats have been discharging waste directly into the ocean due to the inconvenience of using the facility. Due to the large number of berths and moorings, a more efficient and operable pump-out facility is needed.

PROPOSED IMPROVEMENTS:

DOBOR proposes to provide a permanent wastewater treatment system for the project location by connecting the system with the City's wastewater system. The five main components of the proposal are to:

1. Install an 8-inch gravity flow sewer main to serve the Ke`ehi SBH harbor Master's Office and maintenance facility. This sewer main will travel south bound to a proposed sewer lift station that will be located within the harbor's parking lot.

2. Build a new boating pump-out facility.

3. Install a 3-inch force main to connect the new boating pump-out facility with the proposed sewer lift station.

4. Install a 4-inch force main to convey wastewater from the lift station to an existing sewer manhole located in the Sand Island State Recreational Area parking lot. This force main will run under the Kalihi Channel.

5. Close the existing seepage pit wastewater system.

These improvements are shown on **Exhibit 4: *General Site Plan***.

Only item four (4) – the new 4-inch force main - involves a land use within the State Conservation District. The remainder of this report will focus mainly on this aspect of the proposal, and not on activities on the fastlands that lie outside the Conservation District.

This force main will run 1,100 feet between then lift station and the sewer manhole, which is located in the parking lot in front of the Marine Education Training Center. Approximately 800 feet of the force main will run under Kalihi Channel, and thus be in the Conservation District. At the manhole it will connect to the City's existing 12-inch gravity sewer system. This system then transports the wastewater along the Sand Island Access Road to the City's Sand Island Wastewater Treatment Plant.

gravity sewer system. This system then transports the wastewater along the Sand Island Access Road to the City's Sand Island Wastewater Treatment Plant.

The force main will be installed using directional drilling. This is a type of 'trenchless' construction designed to minimize environmental impacts and site disturbances during construction. Staging areas will be established at the lift station and the Sand Island parking lot. Drilling will commence at the lift station site, descend downwards, cross the channel, and then ascend at the parking lot. The drilling will descend to a depth of 65 feet below sea level. This is approximately 25 feet below the sea floor in the channel.

The staging areas will each be approximately 12 feet wide by 60 feet long. This will provide room for the boring and hydraulic equipment. Both sites have adequate space for the staging areas, and this should not impact use of either facility.

The hole will be approximately 1.5 times the diameter of the actual pipe. A bentonite (clay) slurry will be pumped into the hole to provide lubrication and to prevent the drilled hole from collapsing. The pipe will then be inserted at one end, and then pulled through the hole to the other.

Construction is slated to begin in April 2006, or when all necessary permits have been procured. DOBOR plans to have the project completed before the end of the same year. State and federal monies have been secured to cover the construction cost, estimated to be $2.0 million.

SUMMARY OF COMMENTS:

The OCCL consulted the following persons and agencies:

Department of Land and Natural Resources (DLNR), Division of Aquatic Resources (DAR), O`ahu District Land Office, and Historic Preservation Division; Department of Health (DOH), Clean Water Branch; Department of Transportation, Harbors Division; Office of Hawaiian Affairs (OHA); Honolulu City Council Member Romy Cachola; and the City and County of Honolulu Department of Planning and Permitting. Copies of the CDUA were also placed with the Office of Environmental Quality and Control (OEQC) and the Hawai`i State Library.

The following comments were received:

Department of Health, Clean Water Branch

The Clean Water Branch noted that the Hawai`i Revised Statutes, Subsection 342D-50(a) requires that *no person, including any public body, shall discharge any water pollutants into state waters, or cause or allow any water pollutant to enter state waters except in compliance with this chapter, rules adopted pursuant to this chapter, or a permit or variance issued by the director.*

The Branch then offered the following comments:

- The applicant should contact the Army Corps of Engineers to obtain a Section 401 Water Quality Certification (WQC) pursuant to the Clean Water Act Paragraph 401(a)(1).
- The Director of Health may require the submittal of an individual permit application or a Notice of Intent (NOI) for general permit coverage authorized under the National Pollutant Discharge Elimination System (NPDES).
- An applicant for a NPDES permit is required to either submit a cop of the NOI or NPDES permit to the DLNR State Historic Preservation Division (SHPD), or demonstrate that the project has been adequately reviewed by SHPD.
- Any discharges related to construction activities or operation activities must comply with applicable State Water Quality Standards as specified in HAR Chapter 11-54.

Applicant's Response

- *The Army Corps of Engineers gave a* Letter of Permission *for the project in May 2005 (file POH-2005-182). Consequently, a 401 Water Quality Certification will not be needed. The project will not be discharging into navigable waters of the Untied States.*
- *An individual permit for general permit coverage under NPDES is not required for this project. The project does not involve discharges of wastewater into State waters. Two NOI are required, one for construction activities and one for construction dewatering. The first was obtained from DOH in March 2005, and the second is currently being processed by DOH.*
- *The applicant coordinated with SHPD as part of the Environmental Assessment. SHPD found that the project would have* no effect *on historic sites.*
- *Any project related discharges from construction activities will comply with the State Water Quality Standards.*

OCCL's comments

OCCL finds that the applicant has successfully addressed the comments provided by DOH, and that they either have or are in the process of obtaining all the necessary permits listed.

City and County of Honolulu Department of Planning and Permitting

The Department noted on January 27, 2006 that they are currently processing a Special Management Area Use Permit (SMP) and a Shoreline Setback Variance (SPV) for the project. A public hearing was held on January 5, 2006.

OCCL's comments

- *The SMP and SPV were both approved by the City Council on March 1, 2006.*

DLNR Division of Aquatic Resources (DAR)
DAR notes that the area is composed of fill from dredging operations, and that no significant impacts to aquatic resources would be expected from the project.

DAR also suggests precautionary measures be taken to prevent construction materials, petroleum products, debris, and dredged materials from entering coastal waters.

Applicant's Response

- *Project planners concur with the assessment that no significant impact on aquatic resources will occur.*
- *The contractor will implement best management practices to prevent construction materials, petroleum products, etc. from entering coastal waters. These will be implemented in accordance with the NOI permit for construction activities obtained from the Department of Health.*

DLNR Historic Preservation Division (HPD)
HPD records show that there are no known historic sites at the project location. HPD notes that the area has been in-filled to enlarge the shoreline, and that it is unlikely that any historic sites will be found. HPD believes the project will have no effect on historic sites.

DLNR O`ahu District Land Office
No Comment

DOT Harbors Division
No Comment

ANALYSIS:

Following review and acceptance for processing, the applicant was notified, by letter dated January 18, 2006 that:

1. The proposed use is an identified use within the Conservation District according to the Hawai`i Administrative Rules (HAR), § 13-5-22, *Identified land uses in the protective subzone,* P-6 PUBLIC PURPOSE USE, (D-1) *Land uses undertaken by the State of Hawai`i or the counties to fulfill a mandated government function, activity, or service for public benefit and in accordance with public policy and the purpose of the conservation district. Such land uses many include transportation services, water systems, communications systems and recreation facilities. The applicant was advised that this finding did not constitute approval of the proposal.*

2. Pursuant to HAR §13-5-40(4), HEARINGS, a public hearing was not required.

3. Pursuant to HAR §13-5-31 *Permit applications,* the proposed use requires that an environmental assessment be carried out. OCCL accepts that the *Final Environmental Assessment for the Ke`ehi Small Boat Harbor Boating Pump-out Facility* of December 1998, and the *Finding of No Significant Impact (FONSI)* of January 1999 satisfies this requirement.

SECTION 13-5-30 CRITERIA:

The following discussion evaluates the merits of the proposed land use by applying the criteria established in Section 13-5-30, Hawaii Administrative Rules (HAR).

1. *The proposed use is consistent with the purpose of the Conservation District.*

   The objective of the Conservation District is to conserve, protect and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare.

   Staff is of the opinion that the proposed action will not negatively impact the natural resources of the area, and that the project's completion could improve the state of the neighboring coastal waters by reducing wastewater spillage and seepage into groundwater, and by reducing the number of boats illegally dumping wastewater at sea.

2. *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur.*

   Pursuant to HAR §13-5-13, the objective of the Resource Subzone *is to develop, with proper management, areas to ensure sustained use of the natural resources of the area.*

   Staff is of the opinion that the proposed land use is consistent with the Resource Subzone's identified land uses.

3. *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable.*

   Staff notes that the proposed project is consistent with Chapter 205A.

4. *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

Staff is of the opinion that the project will have little to no impact on the existing natural resources. Improvements will be consistent with the State DOH's requirements for the removal of cesspools.

5. *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

   Staff notes the landscape has been extensively disturbed and modified by development, and that the force main will lie beneath the ground. The main disturbance caused by this project will be during the construction stages.

   With directional drilling the pipe lies on in-place soils rather than on introduced bedding, thus minimizing pipe settlement. Less soil is excavated and stored with this process than with others. There will also be minimal ground level disturbance and minimal traffic disturbance. Staff is of the opinion the proposed project and its construction methods are compatible with fits the locality and surrounding area.

6. *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

   Staff notes that the force main will have a minimal impact on the physical and environmental condition of the channel.

7. *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

   The proposed project does not involve subdivision of Conservation District land.

8. *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

   The proposed action will not be materially detrimental to the public health, safety and welfare. Staff concurs with the applicant.

DISCUSSION:

The proposed use is an identified use within the Conservation District according to the Hawai`i Administrative Rules (HAR), § 13-5-22, P-6, PUBLIC PURPOSE USE.

Residents and visitors use the Kalihi Channel for small boat access to and from the Honolulu Harbor. The portions of Sand Island Recreational Area abutting the project area are used as a small boat launch. Fishermen also occasionally use the parking lot. The

Ke`ehi Small Boat harbor on the other end is home to 389 berths and 202 off shore moorings, as well as a boat pump-out facility. Waters just outside the channel's mouth are used for a variety of water sports, including sailing, kayaking, and jet skiing. OCCL does not foresee any impact on these activities during construction or operation of the force main.

Construction of the proposed force main will be accomplished through directional drilling. The staging areas will be in the State land Use Urban District. All activities in the Conservation District, including the drilling and placement of the pipeline, will occur 65 feet beneath sea level, and 25 feet beneath the seafloor. Construction methods have been designed to minimize settling of the drilled hole. OCCL does not foresee any surface disturbances of Conservation Land.

The force main will rest entirely beneath the surface, so no visual or aesthetic impacts are foreseen.

Staff is of the opinion that the proposed project will supply a necessary public service. The applicant states that construction will involve all appropriate best management techniques to avoid debris or by-products from entering the waterway. The current wastewater management in the area does pose an environmental risk. Direct threats include groundwater pollution caused by the clogged leaching field, and the risk of overflow – which would dump untreated sewage directly into the neighboring waters. Indirect threats include the rumored dumping of untreated wastewater into offshore waters by boaters who do not use the current pump-out facility. The proposed wastewater system will address and remediate these risks, which should help improve the quality of Hawai`i's waters.

Staff therefore recommends;

RECOMMENDATION:

Based on the proceeding analysis, staff recommends that the Board of Land and Natural Resources APPROVE this application to install four-inch force main beneath the Kalihi Channel, as part of the new Ke`ehi Small Boat Harbor Boating Pump-out Facility, subject to the following terms and conditions:

1) The applicant shall comply with all applicable statutes, ordinances, rules, regulations, and conditions of the Federal, State and County governments;

2) The applicant shall comply with all applicable Department of Health administrative rules. Particular attention should be paid to Hawaii Administrative Rules (HAR) Section 11-60.1-33, "Fugitive Dust" and to Chapter 11-46, "Community Noise Control;"

3) Any work done on the land shall be initiated within one year of the approval of such use, and unless otherwise authorized be completed within three years of the approval. The applicant shall notify the Department in writing when construction activity is initiated and when it is completed;

4) Before proceeding with any work authorized by the Board, the applicant shall submit four (4) copies of the construction and grading plans and specifications to the Chairperson or his authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three (3) of the copies will be returned to the applicant. Plan approval by the Chairperson does not constitute approval required from other agencies;

5) In issuing this permit, the Department has relied on the information and data that the applicant has provided in connection with this permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Department may, in addition, institute appropriate legal proceedings;

6) The applicant understands and agrees that this permit does not convey any vested rights or exclusive privilege;

7) Where any polluted run-off, interference, nuisance, or harm may be caused, or hazard established by the use, the applicant shall be required to take measures to minimize or eliminate the polluted run-off, interference, nuisance, harm, or hazard;

8) The applicant acknowledges that the approved work shall not hamper, impede or otherwise limit the exercise of traditional, customary or religious practices in the immediate area, to the extent such practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law;

9) During construction, appropriate mitigation measures shall be implemented to minimize impacts to the marine environment, off-site roadways, utilities, and public facilities;

10) The applicant will comply with conditions set out in permits received from the Army Corps of Engineers and the State Department of Health;

11) The applicant will obtain a General Permit for Discharge of Hydrotesting Waters (NOI Form F) prior to commencing construction;

12) Other terms and conditions as may be prescribed by the Chairperson; and

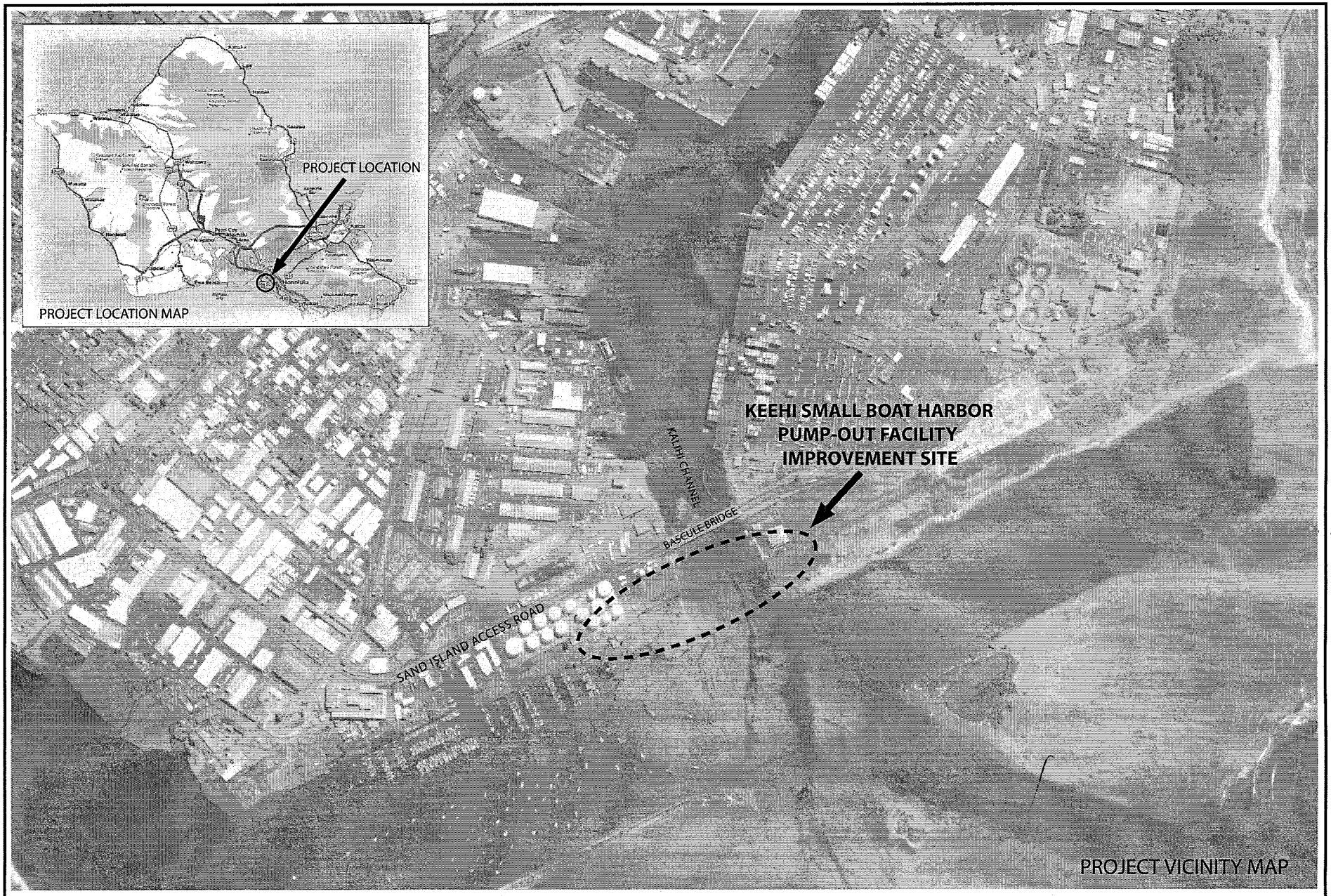
13) Failure to comply with any of these conditions shall render this Conservation District Use Permit null and void.

Respectfully submitted,

Michael Cain
Staff Planner

Approved for submittal:

By: _____
PETER T. YOUNG, Chairperson
Board of Land and Natural Resources



PROJECT LOCATION AND VICINITY MAP

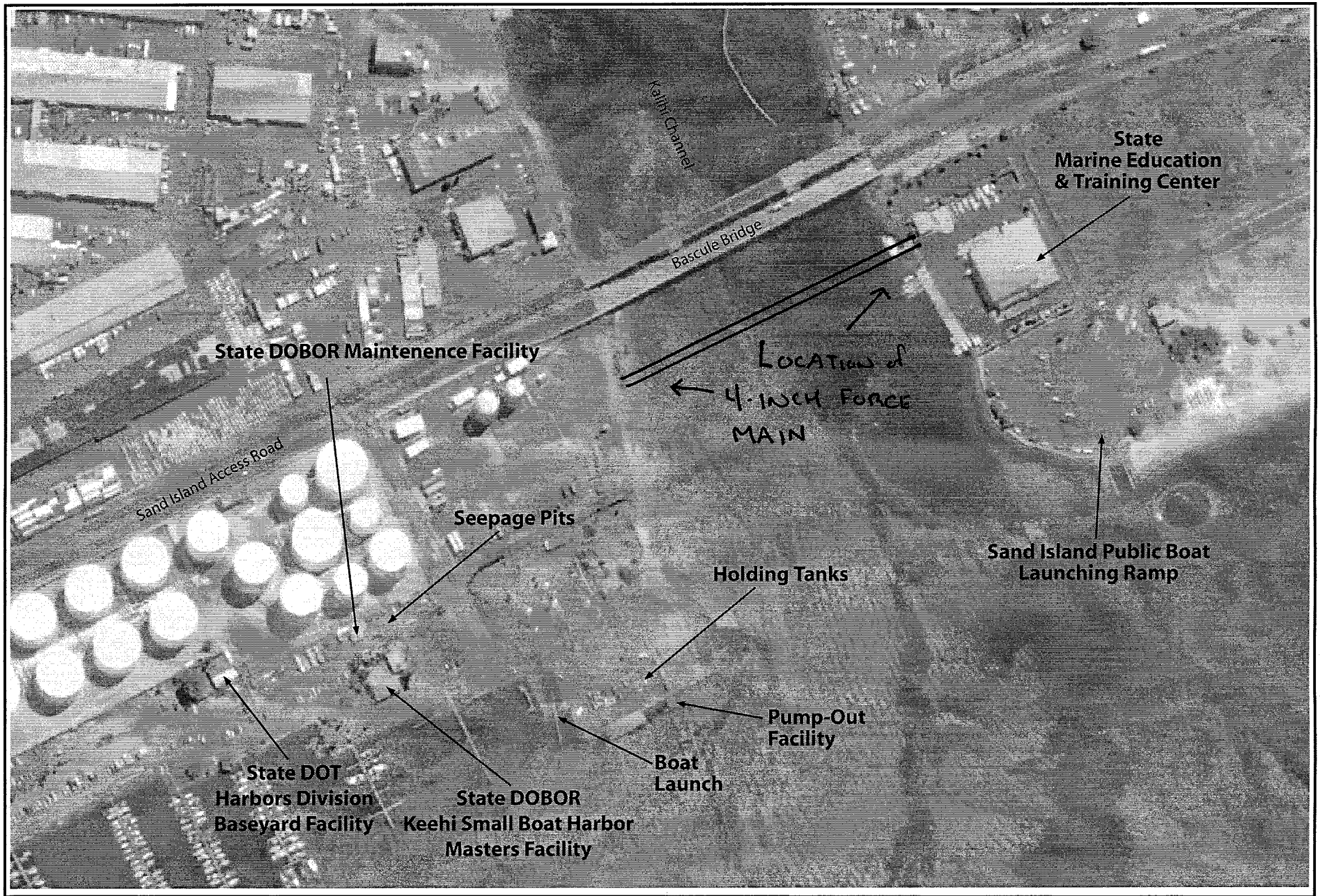
~~FIGURE 1~~

Keehi Small Boat Harbor Boating Pump-Out Facility Project
State DLNR Division of Boating and Ocean Recreation

Source: Digital Globe (Aerial)

SSFM INTERNATIONAL

EXHIBIT 1



EXISTING CONDITIONS MAP

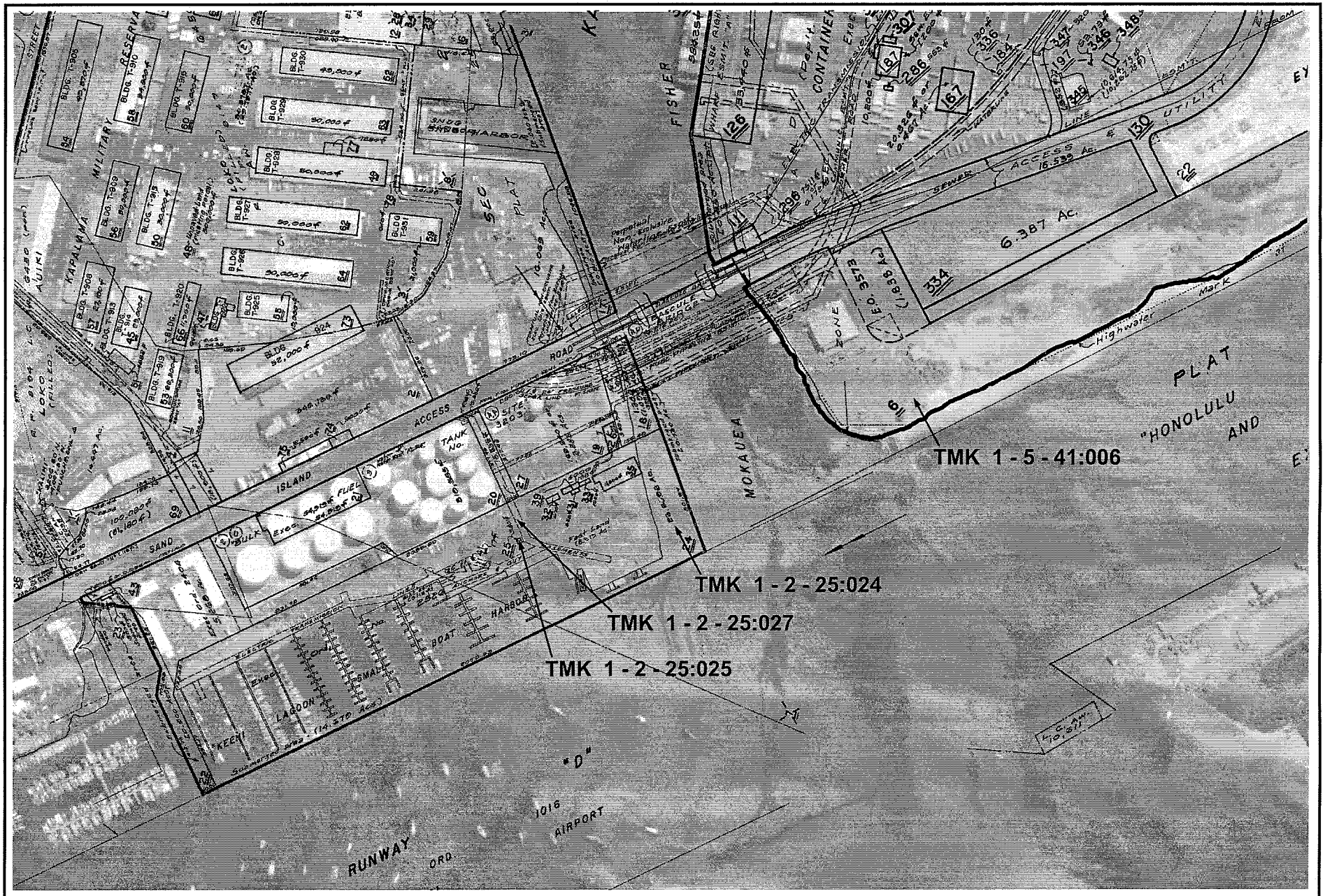
~~FIGURE 2~~

Keehi Small Boat Harbor Boating Pump-Out Facility Project
State DLNR Division of Boating and Ocean Recreation

Source: Digital Globe (Aerial)

SSFM INTERNATIONAL

EXHIBIT 2



TMK MAP

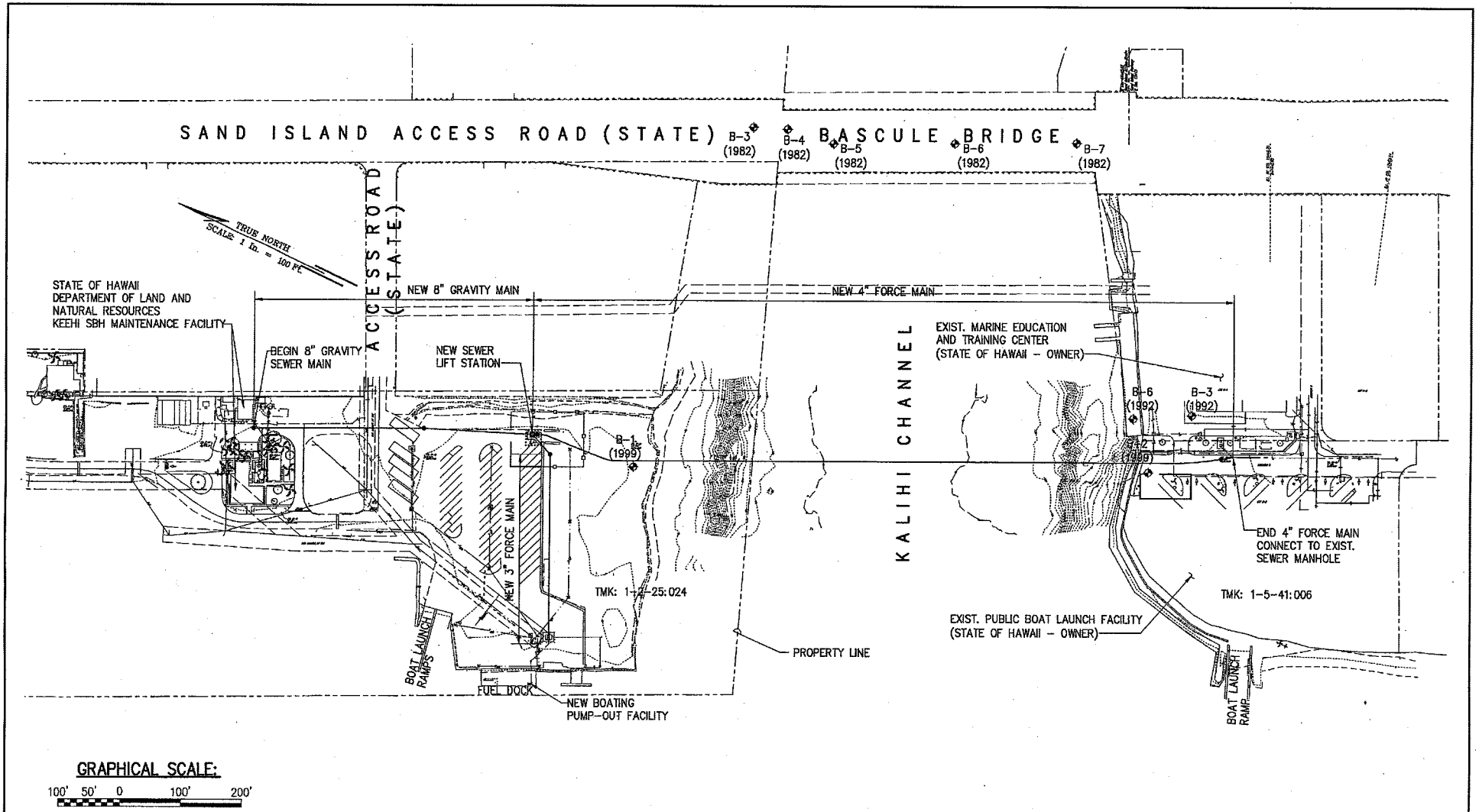
~~FIGURE 3~~

Keehi Small Boat Harbor Boating Pump-Out Facility Project
State DLNR Division of Boating and Ocean Recreation

Source: City and County of Honolulu
Digital Globe (Aerial)

SSFM INTERNATIONAL

EXHIBIT 3



GENERAL SITE PLAN

FIGURE 4

Keehi Small Boat Harbor Boating Pump-Out Facility Project
State DLNR Division of Boating and Ocean Recreation

Source: SSFM International Inc.

EXHIBIT 4